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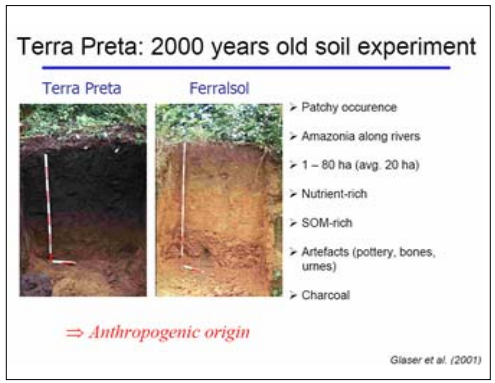
Biochar: A Carbon Negative Model for UMass Amherst

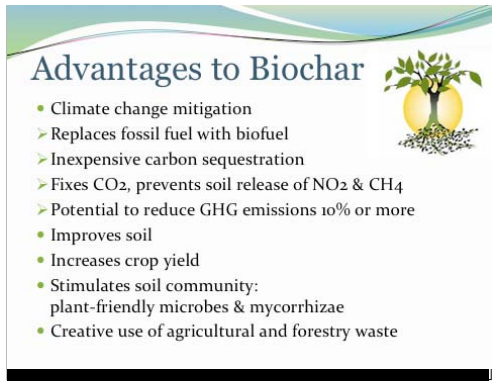
Susanne E. Hale
UMass Amherst, shale133@gmail.com

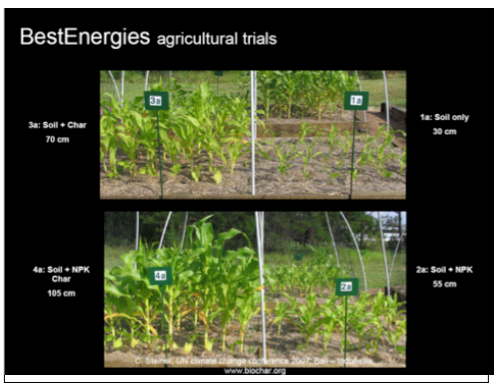
Biochar: A Climate Negativity Model for UMass Amherst

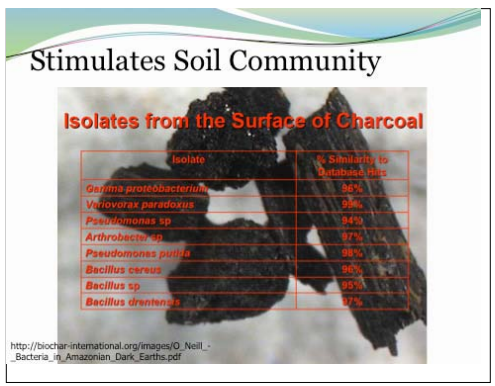
Susanne Hale, UWW student at UMass Amherst

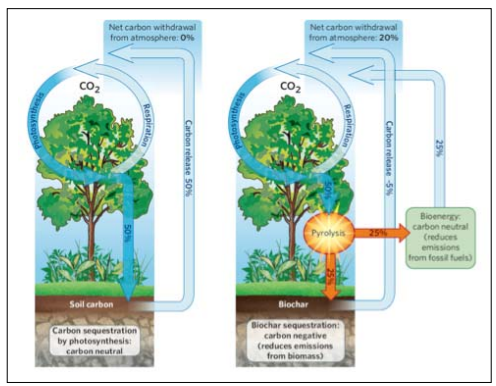
Abstract:
Biochar is a charcoal by-product of pyrolysis production of biofuels from biomass, which offers the potential for long-term, affordable carbon sequestration. Biochar in Amazonian soils have been found to be stable in the soil for hundreds to thousands of years. New pyrolysis technologies currently being developed may have the potential to be used in the future with the new UMass co-generation Central Heating Plant to produce syngas for powering plant turbines, while at the same time producing biochar for carbon sequestration, yielding a carbon negative system. Other benefits of biochar include increased soil fertility and crop yield, stimulation of the soil microbial community and mycorrhizae, prevention of soil release of NO2 and CH4 (potent greenhouse gases), and, according to one study, the potential to reduce greenhouse gases by 10% or more worldwide.

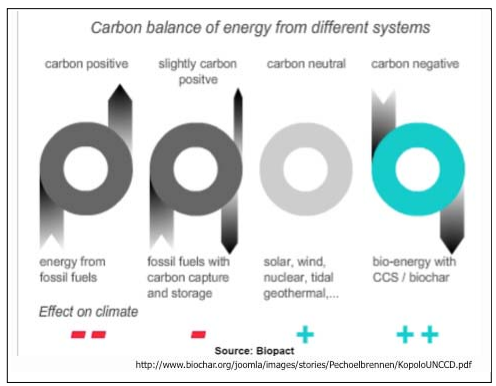


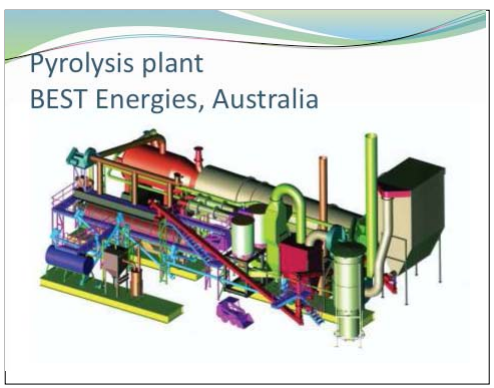


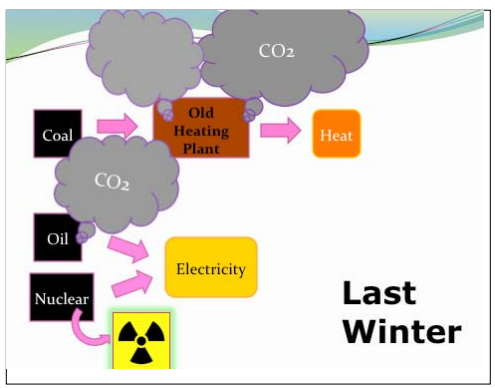


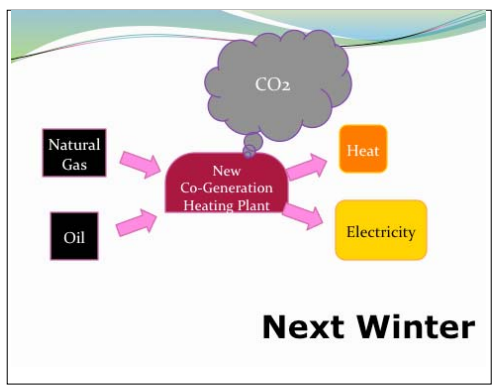


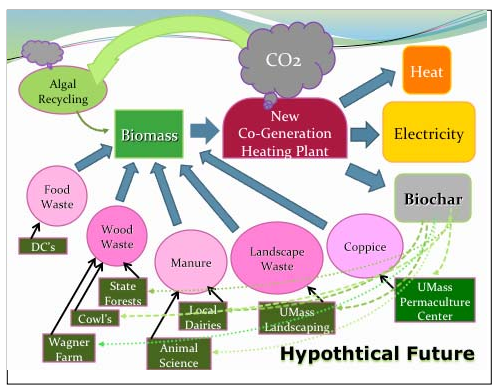












First Annual Conference on Cellulosic Biofuels, UMass Amherst